

IN THE CLAIMS:

Please replace the present claims with the following amended set of claims.

Listing of Claims:

1. (Canceled).
2. (Canceled)
3. (Previously Presented) A microfluidic device of Claim 33 wherein said uniform array of posts has a second column of posts adjacent to a first column of posts, said posts of said second column positioned between the posts of said first column, thereby preventing said sample liquid from flowing in a straight line through said space.
4. (Previously Presented) A microfluidic device of Claim 33 wherein said posts have at least one wedge-shaped cutout aligned vertically to said substrate for facilitating movement of the sample liquid across said well from said sample entry uniformly over said substrate.
5. (Previously Presented) A microfluidic device of Claim 33 wherein said uniform array of posts is positioned above said substrate.
6. (Previously Presented) A microfluidic device of Claim 33 wherein said uniform array of posts contacts said substrate.
7. (Previously Presented) A microfluidic device of Claim 33 further comprising a ramp for directing flow upward or downward to a substrate disposed on a plateau.
8. (Previously Presented) A microfluidic device of Claim 33 further comprising a groove or weir disposed perpendicularly to the direction of sample flow.
9. (Canceled).

10. (Canceled)

Claims 11-32 (Canceled)

33. (Currently Amended) A microfluidic device for assaying a liquid biological sample of 10 μ L or less comprising:

(a) an inlet port for receiving said sample;

(b) a capillary passageway in fluid communication with said inlet port, said passageway having dimensions that induce a predetermined capillary force for moving said sample through said passageway;

(a) (c) at least one well defined by top and bottom surfaces enclosing a sidewall, said well having an entry in said sidewall for introducing said sample into said well from a said capillary passageway and an air vent positioned in said sidewall ~~opposite said sample entry~~, said well being wider than said capillary and containing a uniform array of posts;

(b) (d) a reagent or conditioning agent deposited on an absorbent substrate, said reagent or conditioning agent-containing substrate positioned adjacent to said uniform array of posts; and

wherein said posts are arrayed in columns at a right angle to the flow of said sample from said sample entry to said air vent for directing said sample from the entry of said well uniformly over said substrate containing reagent or conditioning agent in a predetermined uniform manner and purging air from said well through said air vent, the capillary force in said well being lower than said predetermined capillary force in said passageway of (b), said capillary force in said well being determined by disposing said posts to obtain contact of said sample with said substrate in uniform manner.

34-35. (Cancelled)

36. (Previously Presented) A microfluidic device of Claim 33 wherein said uniform array of posts is positioned between said entry and said substrate.

37-38. (Canceled).

39. (Withdrawn) A microfluidic device for assaying a liquid biological sample of 10 μ L or less comprising:

(a) at least one well defined by top and bottom surfaces enclosing a side wall, said well having an entry in said sidewall for introducing said sample into said well from a said capillary passageway, said well being wider than said capillary, and an air vent positioned in said sidewall opposite said sample entry;

(b) a reagent or conditioning agent deposited on an absorbent substrate;

(c) means for contacting said sample with said absorbent substrate in a uniform manner and purging air from said well through said air vent.

40. (New) A microfluidic device of Claim 33 wherein said air vent is positioned after said uniform array of posts.

41. (New) A microfluidic device of Claim 33 wherein said air vent is positioned before said uniform array of posts.